

Global Comparators

Leading hospitals leading quality

The Dr Foster Global Comparators Project

14 September 2011



Bringing together the finest minds at top medical institutions to:

- share outcomes, knowledge and experience,*
- collaborate on ground breaking research*
- and improve quality of care and clinical outcomes*

Who are Dr Foster?

At the heart of the NHS

- Largest provider of health informatics services in UK
- Established 10 years ago
- Created the original English benchmarking methodology and tools
- Publish the annual 'Hospital guide'

Leading Academics and Partnerships – Dr Foster Unit at Imperial College

- Professor Sir Brian Jarman
- Dr Paul Aylin
- Dr Alex Bottle

Why International Comparisons?

- Improving quality through international collaboration
- Engaging clinical leaders in managing excellence
- Highlighting variations in global quality standards
- Forum for networking and organisation knowledge transfer
- Elite group of hospitals driving healthcare research

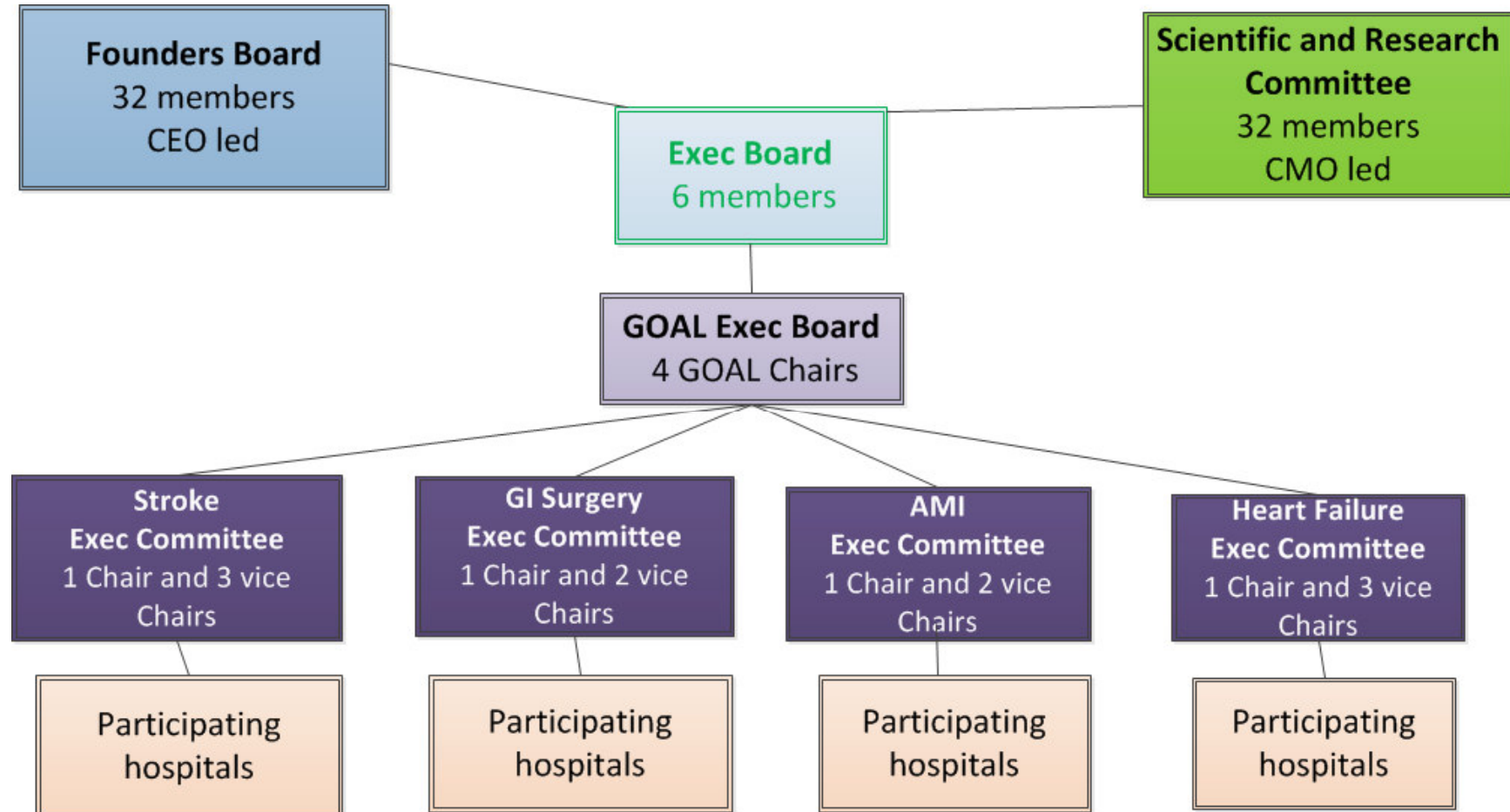
Evaluation

- The project will be evaluated independently by Professor Naomi Fulop & Professor David Guest from NIHR King's Patient Safety and Service Quality Research Centre, King's College London
- The evaluation will assess value and contribution to quality improvement and focus on three principal research questions:
 - *Can comparative health data be effectively shared across national boundaries?*
 - *How is information shared and used in each hospital?*
 - *Does using the information facilitate sharing best practice and result in improvements in clinical quality?*
- The evaluation will focus on the broader picture and application of results to generate change; this is far more than a technical evaluation of methodologies

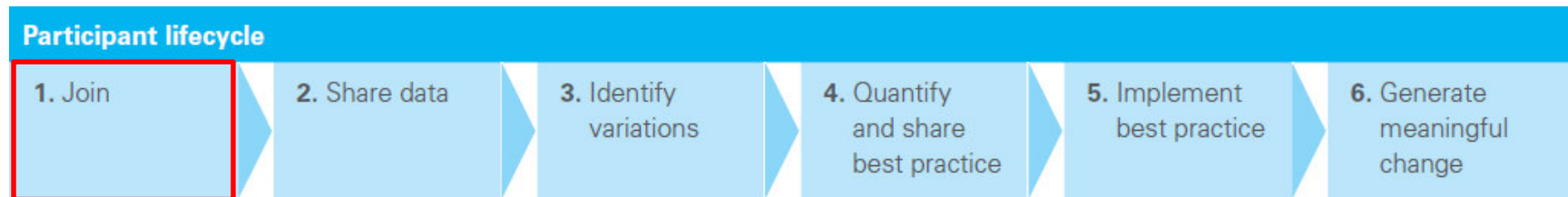
Programme Components

- The **Founders Board** provides a forum for discussing the strategic direction and long-term objectives for the project.
- A **Scientific & Research Committee** reviews technical decisions, provides local knowledge and authorises extended academic research among participants .
- The **Exec Board** was created by the participants as a more nimble body able to deal with short term issues in a timely manner.
- The “**Global Outcomes Accelerated Learning (GOAL)**” Programmes are bringing individuals together for a deep review of analytical outputs and internal processes in four specific clinical areas (e.g. mortality for stroke)
- Two conferences – Boston (21 March 2011) and London (Q4 2011) – these are key in providing a forum to feedback to the entire group
- The Global Comparators Toolkit highlights groups of patients that are associated with deviations in performance relative to the group

Programme Components



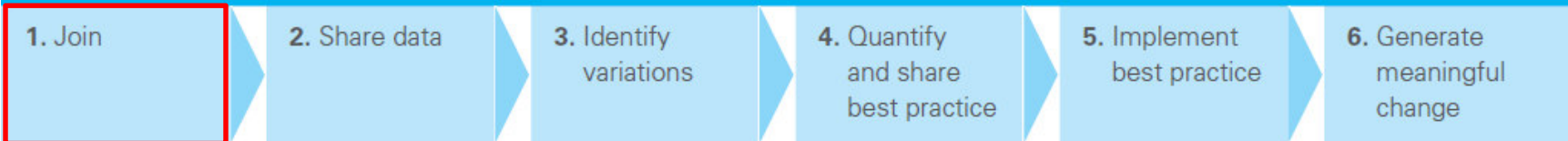
Participant Lifecycle



- An initial collaboration of 32 hospitals across 5 countries with sponsorship at CEO or CMO level, providing the opportunity to work closely with esteemed international peers
- Examining - To what extent can sharing across international borders extend both the theory and practice of quality improvement?
- Novel technical research, improved international collaboration and improved quality of care
- Facilitated collaboration based on open sharing of risk adjusted indicators based on routine administrative data
- A commitment for the long term to expand the group (and add further countries)

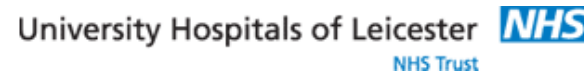
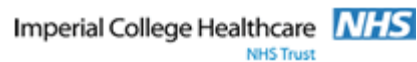
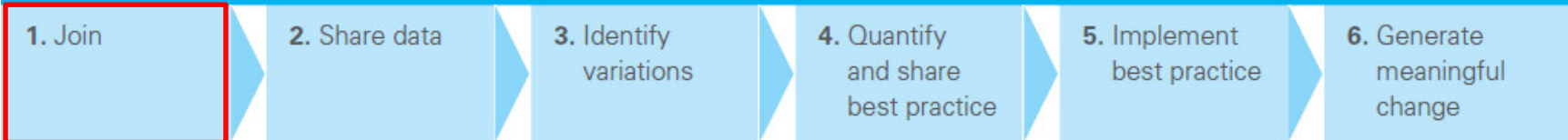
Participants USA

Participant lifecycle



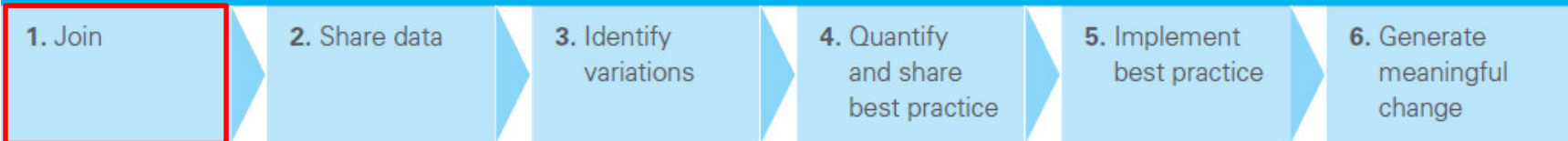
Participants England

Participant lifecycle



Participants Holland/Italy/ Belgium

Participant lifecycle



Azienda Ospedaliera CTO - MARIA ADELAIDE

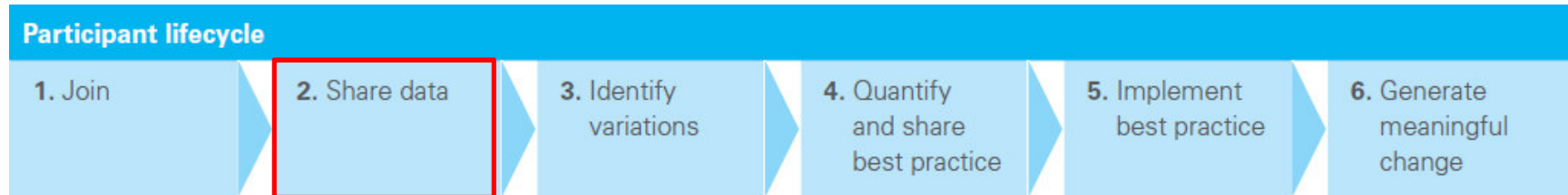


VU medisch centrum



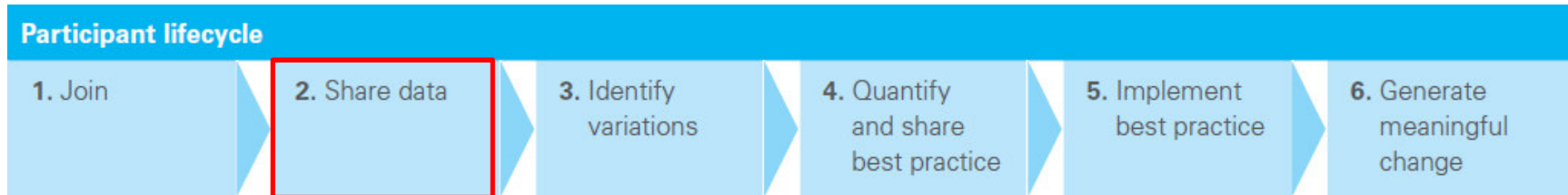
LEIDS UNIVERSITAIR MEDISCH CENTRUM

Share Data – Technical Output



- Backed by Imperial College, London,
- The project adapts and applies respected methodologies to create unifying risk models and underpin transparent, like-for-like comparisons (across mortality, readmissions, length of stay)
- Dr Foster have developed an international procedure mapping protocol
- Certain assumptions have been made and these will be reviewed through the Scientific and Research Committee
- It has created a common international patient level dataset
- There is an opportunity for wider research among the group of participants

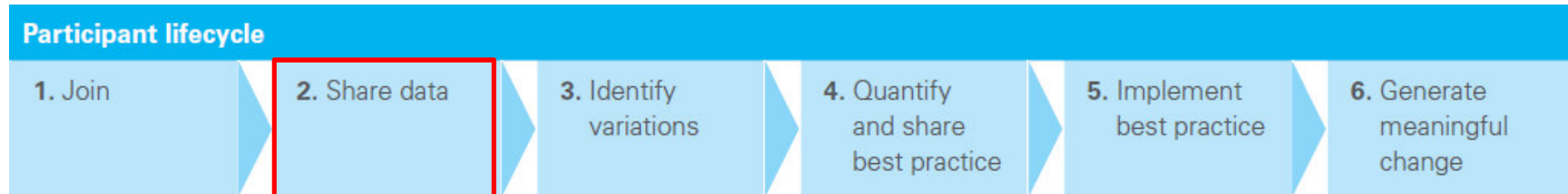
Share Data – What has been received so far



- 9 data formats
- 2 diagnosis coding systems
- 3 procedure coding systems
- 5+ years of data

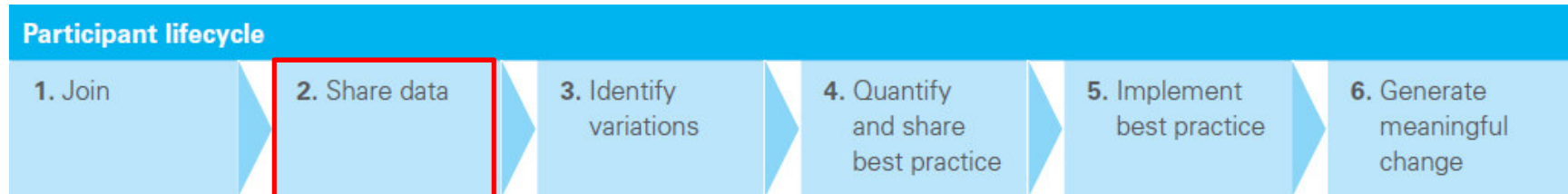
- 15.9m encounters received
- 8.1m inpatients & observations loaded

Share Data – What we have produced so far



- 259 CCS diagnoses (100% activity)
- 32 procedures
- Mappings for risk model parameters
- 17 co-morbidities (Charlson)
- 3 outcomes
 - in-hospital mortality
 - upper quartile length of stay
 - 30-day urgent readmission
- 3 sets of risks
 - crude rate
 - simple indirectly standardised (age (7 bands), sex, type of admission, year)
 - full case-mix adjusted logistic regression model

Share Data



- Both original and mapped fields are available in the tool
- Mapped fields allow for comparison
- Original fields allow for deeper local analysis
- Fields included in the risk model are flagged in the tool
- Certain data was excluded
 - Based on best definition available of inpatient
 - And based on data quality at the individual hospitals
- Model is based on activity in the group (no external factors)
- Some Dutch hospitals were excluded from the model but are included in the comparative tool output (data quality issues)

Identify Variations – Mortality

Participant lifecycle

1. Join

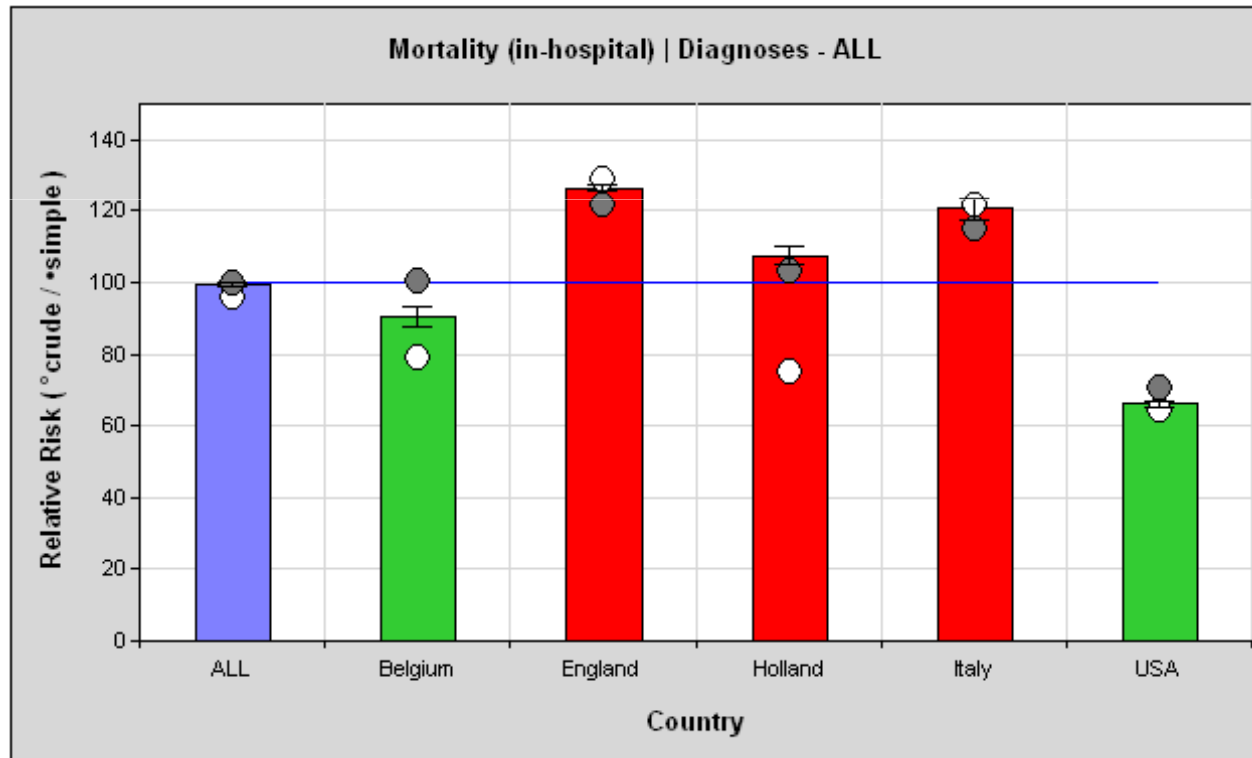
2. Share data

3. Identify variations

4. Quantify and share best practice

5. Implement best practice

6. Generate meaningful change



- 259 diagnoses
- 2007-2009
- 3.3m discharges
- 105k deaths

Identify Variations – Mortality

Participant lifecycle

1. Join

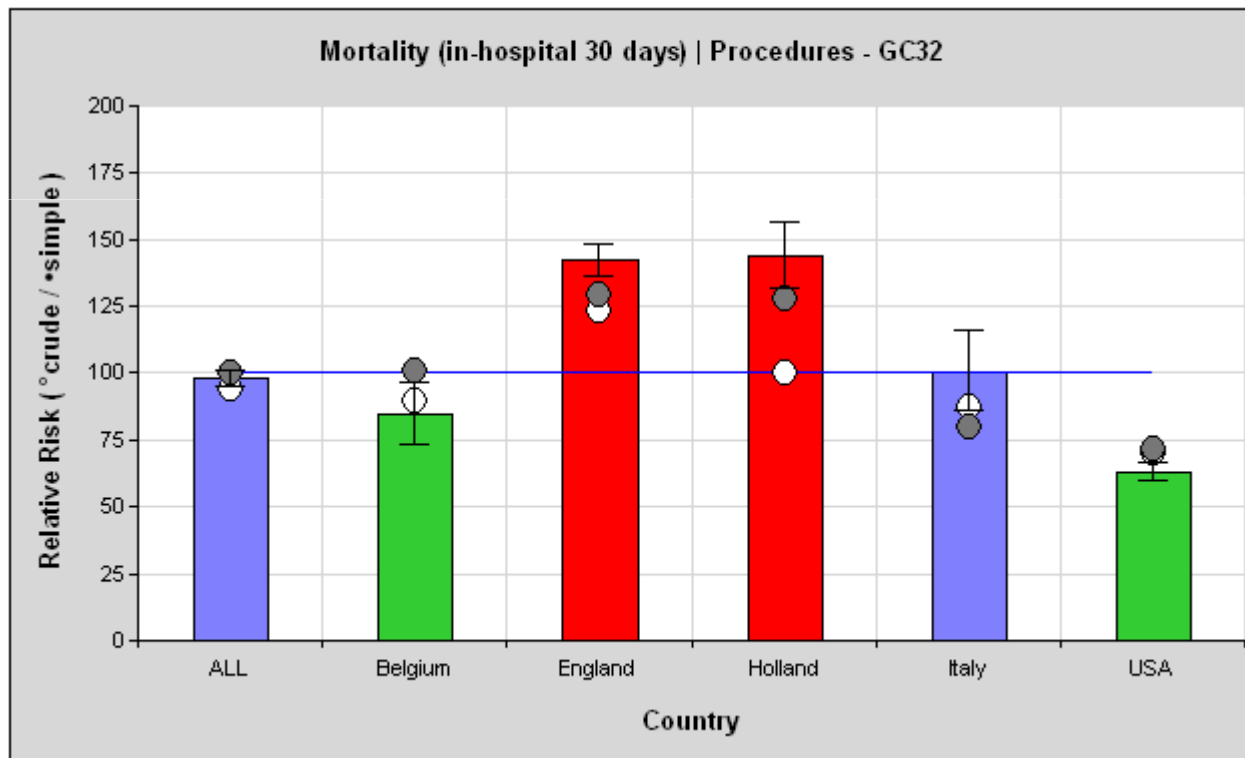
2. Share data

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- 32 procedures
- 2007-2009
- 373k discharges
- 5k deaths

Identify Variations – Length of Stay

Participant lifecycle

1. Join

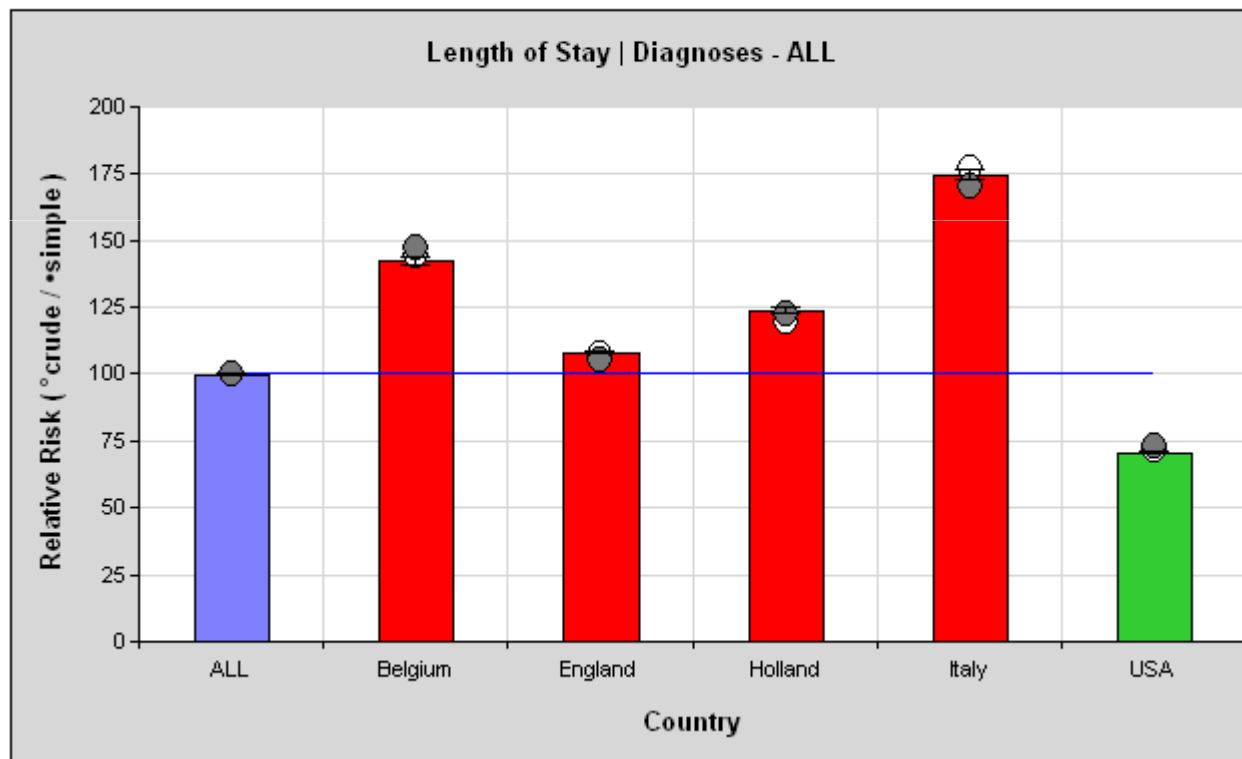
2. Share data

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- 259 diagnoses
- 2007-2009
- 3.3m discharges
- 21% “long”

Identify Variations – Length of Stay

Participant lifecycle

1. Join

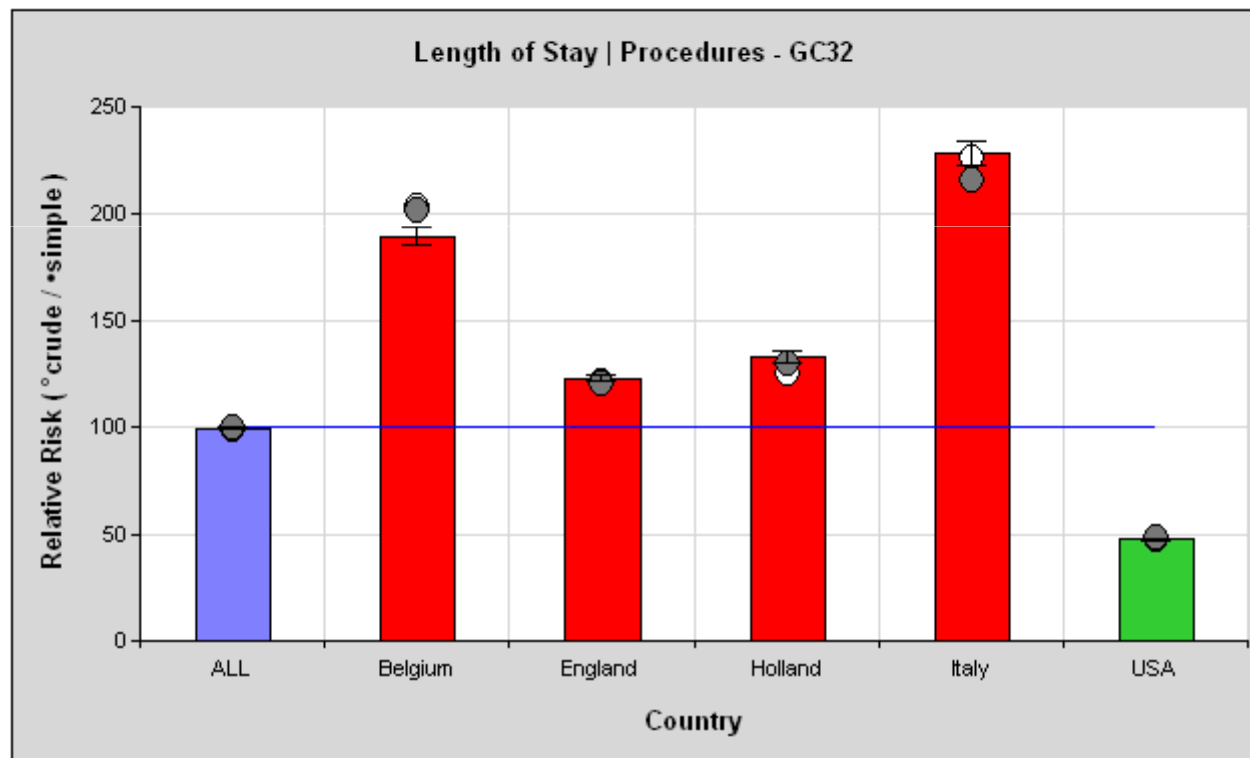
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- 32 procedures
- 2007-2009
- 373k discharges
- 21% “long”

Identify Variations – Readmissions

Participant lifecycle

1. Join

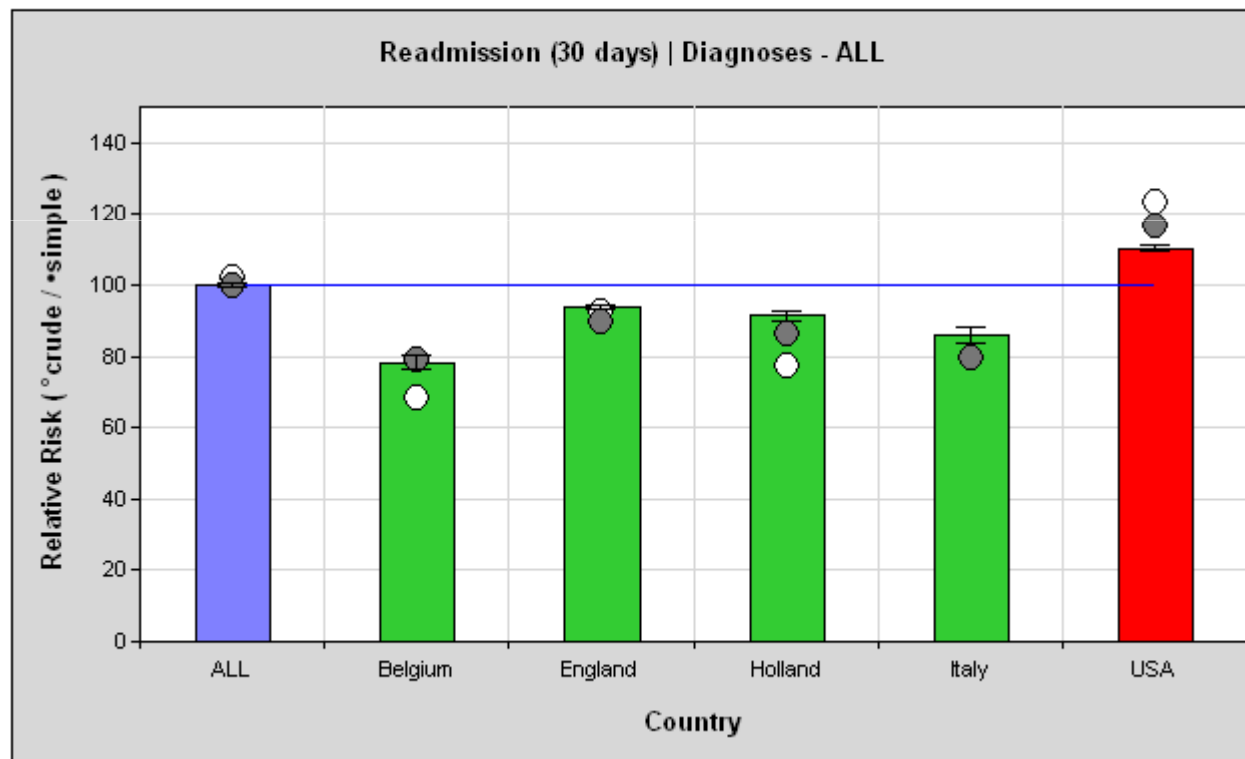
2. Share data

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- 259 diagnoses
- 2007-2009
- 3.1m live discharges
- 222k readmissions

Identify Variations – Readmissions

Participant lifecycle

1. Join

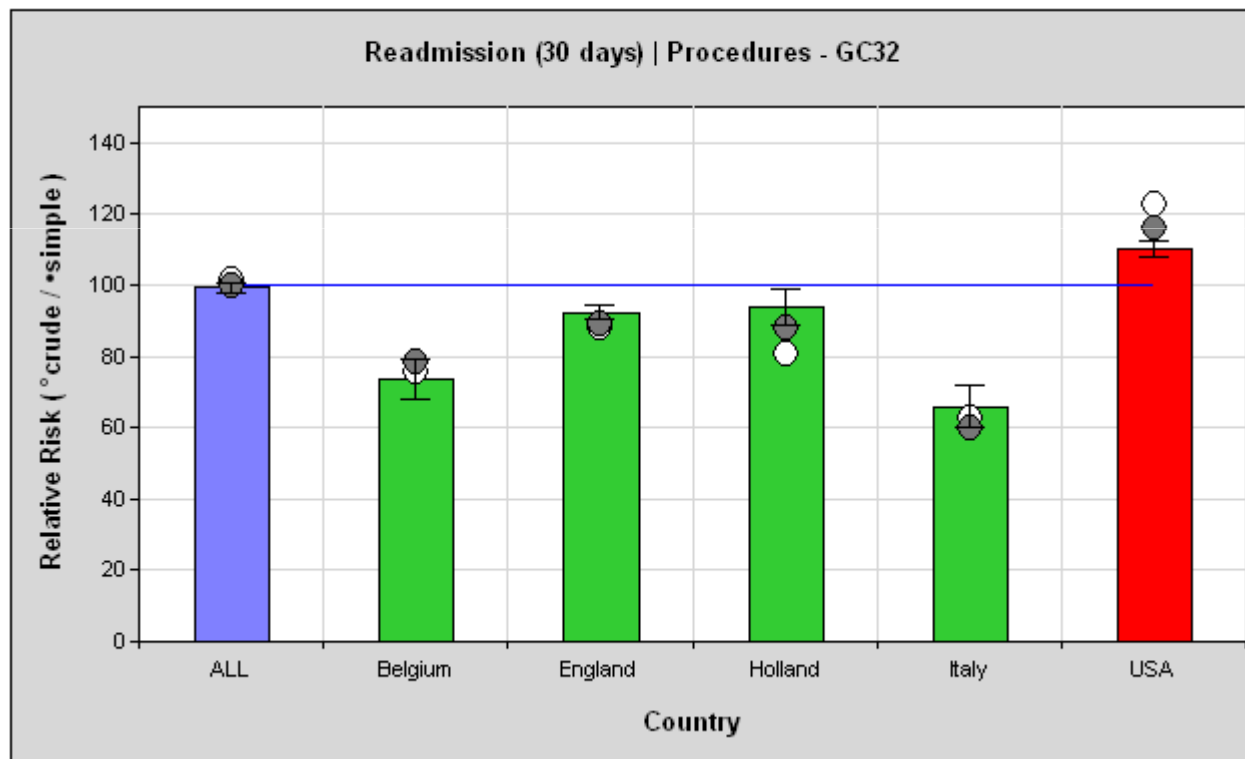
2. Share data

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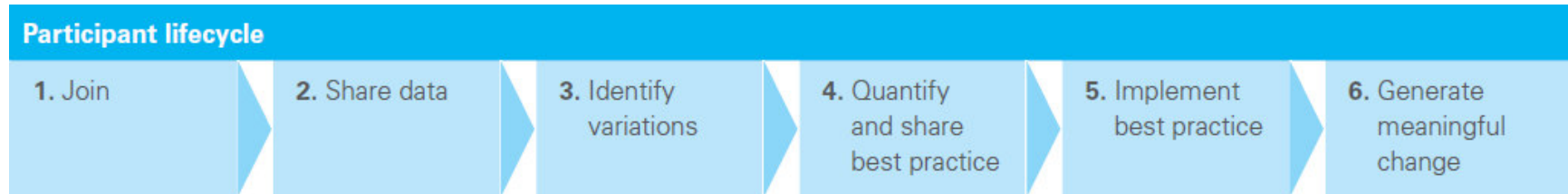
5. Implement best practice

6. Generate meaningful change



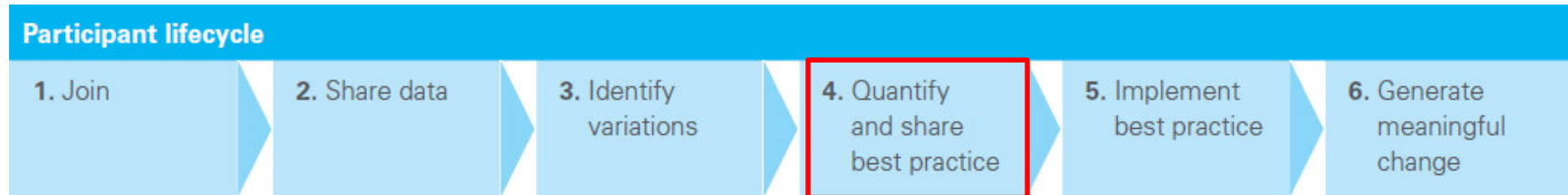
- 32 procedures
- 2007-2009
- 357k live discharges
- 20k readmissions

Quantify and Share Best Practice



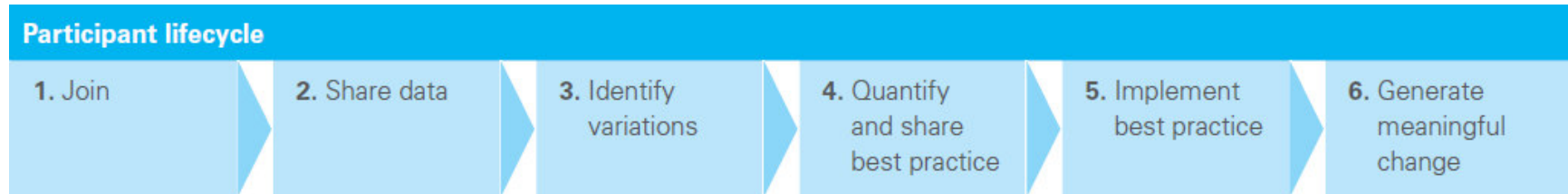
- 4 GOAL topics for 2011
- Reducing readmissions in Heart Failure
- Examining the links between Mortality, LOS and Readmissions in AMI
- Reducing mortality in Stroke
- Understanding the variations in the GC data for Colorectal surgery

Quantify and Share Best Practice



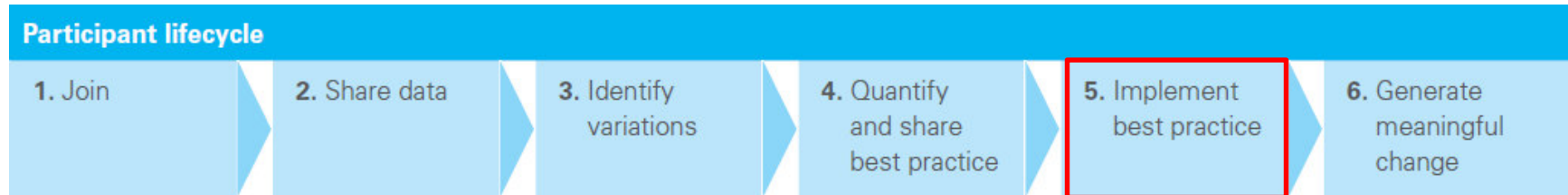
- 4 Clinical GOAL (Global Outcomes Accelerated Learning), programmes
- Structured programme of collaborative sharing and learning
- Engagement of clinical and data leads within each participant hospital
- Participants invited to join up to 2 GOAL's per year
- Unique opportunity to identify best practice from some of the worlds finest medical institutions

Quantify and Share Best Practice



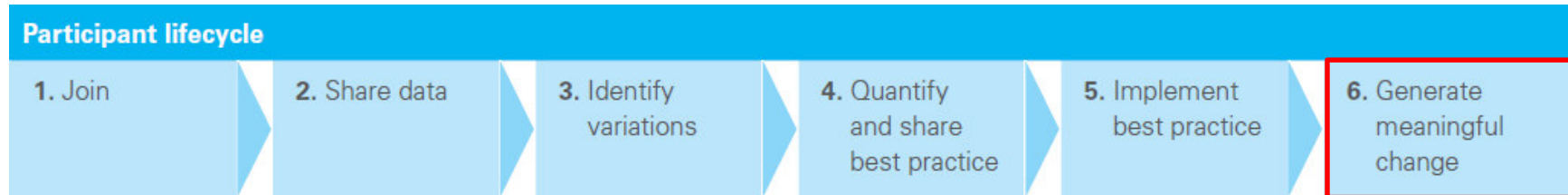
- Currently the GOAL groups have created Exec Teams consisting of one person from each region to plan and create objectives for each GOAL
- All GOAL groups have created and completed surveys looking at both clinical and organisational differences
- Data from these surveys is currently being analysed by Dr Foster and presented back to the GOAL groups at face to face meetings in London and Boston.
- The dataset is also being scrutinised and the GOAL groups are hoping to collect other pieces of data to make the dataset more comparable.

Implement Best Practice



- 2012
- Best practice plans will be generated
- There will be peer supported implementation
- All participants will have access to a growing knowledge bank of implementable best practice

Generate Meaningful Change



- 2013
- The GOAL group will track changes improvements in their data
- The data will continue to become more comparable as other datasets are incorporated
- Research projects will be running and papers may have been published looking at countrywide variations.

Conclusion

- This project brings together leading academic hospitals to collaborate, with focus and information to improve quality of care
- Initial datasets have been gathered
- Initial models built and have been improved
- Tools developed to interrogate data and share views
- Conference is forum to exchange ideas and dig deeper
- International Collaborations June 2011 – December 2013
- Independent Evaluation to assess value (and blockers to value)
- Tight deadlines, benefits will increase with engagement
- Datasets continually being improved
- GOALs at 'evidence gathering' stage
- Engagement is high amongst participants